

AMENDMENTS

Listing of Claims:

The following listing of claims replaces all previous listings or versions thereof:

1. (Currently amended) A method comprising:
 - a) obtaining a peptide~~–or–protein~~ that selectively binds to prostate cancer tissue,
wherein the peptide is less than 100 amino acids in length and includes a prostate cancer targeting motif;
 - b) attaching an agent to the peptide or protein to form a complex; and
 - c) exposing the complex to a sample suspected of containing prostate cancer cells.
2. (Withdrawn) The method of claim 1, further comprising administering the complex to a human subject.
3. (Original) The method of claim 1, wherein the sample is a thin section of a tissue.
4. – 10. (Canceled)
11. (Original) The method of claim 1, further comprising detecting prostate cancer cells in said sample cancer in bone marrow.
13. (Original) The method of claim 1, further comprising diagnosing prostate cancer.
14. (Original) The method of claim 1, further comprising providing a prognosis for an individual with prostate cancer.
15. (Original) The method of claim 4, wherein the targeting peptide comprises at least three contiguous amino acids of a sequence selected from any of SEQ ID NO:5 through SEQ ID NO:35, SEQ ID NO:37 or SEQ ID NO:83 through SEQ ID NO:129.

16. (Currently amended) The method of claim 15, wherein the targeting peptide has an amino acid sequence selected from ~~SEQ ID NO:34~~ SEQ ID NO:34, SEQ ID NO:37, SEQ ID NO:83 or SEQ ID NO:84.

17. (Original) The method of claim 1, wherein the agent is a therapeutic agent or an imaging agent.

18. (Currently amended) The method of claim 17, wherein the agent is a therapeutic agent, and the therapeutic agent is a drug, a chemotherapeutic agent, a radioisotope, a pro-apoptosis agent, an anti-angiogenic agent, a survival factor, an anti-apoptotic agent, an enzyme, a hormone, a hormone antagonist, a cytokine, a cytotoxic agent, a cytocidal agent, a cytostatic agent, a growth factor, a peptide, a protein, an antibiotic, an antibody, a Fab fragment of an antibody, a hormone antagonist, a nucleic acid, an antigen, a virus, a bacteriophage, a bacterium, a liposome, a microparticle, a magnetic bead, a microdevice, a yeast cell, a mammalian cell, a cell or an expression vector.

19. (Original) The method of claim 18, wherein the pro-apoptosis agent is selected from the group consisting of gramicidin, magainin, mellitin, defensin, cecropin, (KLAKLAK)₂ (SEQ ID NO:1), (KLAKKLA)₂ (SEQ ID NO:2), (KAAKKAA)₂ (SEQ ID NO:3) and (KLGKKLG)₃ (SEQ ID NO:4).

20. (Currently amended) The method of claim 19, wherein the pro-apoptosis agent is ~~(KIAK)₂~~ (KLAKLAK)₂ (SEQ ID NO:1).

21. (Withdrawn; currently amended) The method of claim 18, wherein the agent is an anti-angiogenic agent—is selected from the group consisting of thrombospondin, angiostatin₅, pigment epithelium-derived factor, angiotensin, laminin peptides, fibronectin peptides, plasminogen activator inhibitors, tissue metalloproteinase inhibitors, interferons, interleukin 12, platelet factor 4, IP-10, Gro-B, thrombospondin, 2-methoxyoestradiol, proliferin-related protein, carboxiamidotriazole, CM101, Marimastat, pentosan polysulphate, angiopoietin 2 (Regeneron), interferon-alpha, herbimycin A, PNU145156E, 16K prolactin fragment, Linomide, thalidomide, pentoxifylline, genistein, TNP-470, endostatin, paclitaxel, Docetaxel,

polyamines, a proteasome inhibitor, a kinase inhibitor, a signaling peptide, accutin, cidofovir, vincristine, bleomycin, AGM-1470, platelet factor 4 and minocycline.

22. (Withdrawn) The method of claim 18, wherein said cytokine is selected from the group consisting of interleukin 1 (IL-1), IL-2, IL-5, IL-10, IL-11, IL-12, IL-18, interferon- γ (IF- γ), IF- α , IF- β , tumor necrosis factor- α (TNF- γ), or GM-CSF (granulocyte macrophage colony stimulating factor).

23. (Withdrawn) The method of claim 18, further comprising:

- a) administering the complex to an individual with prostate cancer; and
- b) treating the prostate cancer.

24. – 55. (Canceled)

56. (Original) The method of claim 6, further comprising categorizing a prostate cancer as androgen-dependent or androgen-independent.

57. (Currently amended) The method of claim 56, wherein said categorizing is based on the expression of ~~IL-11Ra~~ IL-11R α in the blood vessels of said prostate cancer.

58. (New) The method of claim 17, wherein the agent is an imaging agent.

59. (New) The method of claim 58, wherein the imaging agent is a radioisotope, a paramagnetic ion, or an enzyme.

60. (New; Withdrawn) The method of claim 59, wherein the imaging agent is a paramagnetic ion selected from the group consisting of chromium (III), manganese (II), iron (III), iron (II), cobalt (II), nickel (II), copper (II), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), vanadium (II), terbium (III), dysprosium (III), holmium (III) and erbium (III), lanthanum (III), gold (III), lead (II), and bismuth (III).

61. (New; Withdrawn) The method of claim 59, wherein the imaging agent is a radioisotope selected from the group consisting of astatine²¹¹, ¹⁴carbon, ⁵¹chromium, ³⁶chlorine, ⁵⁷cobalt,

⁵⁸cobalt, copper⁶⁷, ¹⁵²Eu, gallium⁶⁷, ³hydrogen, iodine¹²³, iodine¹²⁵, iodine¹³¹, indium¹¹¹, ⁵⁹iron, ³²phosphorus, rhenium¹⁸⁶, rhenium¹⁸⁸, ⁷⁵selenium, ³⁵sulphur, technetium^{99m} and yttrium⁹⁰.

62. (New) The method of claim 59, wherein the imaging agent is an enzyme selected from the group consisting of urease, alkaline phosphatase, hydrogen peroxidase and glucose oxidase.